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Changing consumption patterns*

Report of the Secretary-General

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* The present report was prepared by the Department of Economic and Social Affairs of the United Nations Secretariat as task manager for chapter 4 of Agenda 21, with contributions from other United Nations agencies and international organizations. The report is a brief factual overview, which intends to inform the Commission on Sustainable Development on the key developments in the subject area.

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Introduction

1. Agenda 21[1] notes that the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries. It further notes that while consumption is very high in certain parts of the world, the basic consumer needs of a large section of humanity are not being met. Changing consumption patterns towards sustainable development will require a multi-pronged strategy focusing on meeting basic needs and improving the quality of life, while reorienting consumer demand towards sustainably produced goods and services.

2. The issue of changing consumption patterns is thus very wide-ranging. The present report will focus on broad patterns of consumer demand as they relate to sustainable development and efforts that are being made to change those patterns to ensure sustainability.

I. Trends in consumption

3. The world is now in the midst of a multidimensional process of globalization. People, goods, services, information and money are moving around the globe more rapidly and in larger volumes. World trade in goods and services increased over 60 per cent in the last decade, reaching almost $6.7 trillion in 1998, while foreign direct investment (FDI) increased more than four-fold to $865 billion.[2] Per capita consumption increased as real gross domestic product (GDP) grew at 2.9 per cent per year while population grew at 1.4 per cent per year.

4. A closer look at economic trends, however, shows large disparities between and within regions. As noted in the 1998 *Human Development Report*,[3] 20 per cent of the world's population, in the high-income countries, account for 86 per cent of total private consumption expenditures, while the poorest 20 per cent, in low-income countries, consume a mere 1.3 per cent. Consumption per capita has increased steadily in industrialized countries at about 2.3 per cent per year over the past 25 years, very rapidly in East Asia at about 6.1 per cent, and at a rising rate in South Asia at around 2.0 per cent. On the other hand, the consumption expenditure of the average African household is 20 per cent less than it was 25 years ago. The lack of adequate consumption by the poorer segment of the world population is a critical concern for sustainable development and is considered further in the report of the Secretary-General on combating poverty.

5. More efficient use of energy is critical to sustainable consumption. Average per capita world commercial energy consumption amounted to 1,692 kilograms of oil equivalent (kgoe) in 1997.[4] People in the Organisation for Economic Cooperation and Development (OECD) countries continued to consume much more energy than those in developing countries, an average of 6,400 kgoe per capita in 1999: this was 10 times the consumption in developing regions, which was about 620 kgoe per capita.[5] In North America, per capita annual gasoline consumption for motor vehicles amounted to 1,637 litres per person in 1997, compared with 427 litres per person in Western Europe, 50 litres per person in Asia (excluding West Asia) and a mere 31 litres per person in sub-Saharan Africa. Per capita energy consumption for the world as a whole did not change significantly during the period 1990-1997. High growth in East Asia and the Pacific and moderate growth in West Asia, South Asia and North Africa were offset by a substantial decline in Eastern and Central Europe. In the industrialized countries, per capita energy consumption showed moderate annual growth during this period from their already high levels.[6] For much of the developing world, fuelwood and charcoal remain the primary source of energy, while industrial bioenergy use is growing in some developed countries, including Sweden, Finland, Austria, France and Italy.[7]

6. On the natural resource front, over the past century, mainly as a result of agricultural expansion to meet the growing demand for food and other agricultural products, about half of the world's wetlands area has been lost and grasslands have been reduced by more than 90 per cent in some areas.[8] The world's forested area has declined from 11.4 square kilometres (km^2) per person in 1970 to only 7.3 km^2 per person at present.[9] In addition, nearly 70 per cent of the world's major fish stocks are overfished or are being fished at their biological limit to meeting growing demand for fish and fish products. Soil degradation has afflicted two thirds of the world's agricultural lands as farming practices have intensified to meet increasing demand for food, with particularly high growth in demand for meat and dairy products. Dams and other water diversions to meet growing

demand for water, especially for agriculture, fragment almost 60 per cent of the world's large rivers. As a result of unsustainable development and degradation of freshwater ecosystems, 20 per cent of the world's freshwater species are extinct, threatened or endangered.

7. Looking at material flows, industrial economies have become more efficient in their use of materials, but overall waste generation has continued to increase.[10] A study of five industrialized countries for the period 1975-1996 showed that although resource consumption declined on a per capita and per unit GDP basis, overall resource consumption and waste flows into the environment continued to grow owing to economic and population growth. One half to three quarters of annual resource inputs to industrial economies were returned to the environment as wastes within a year. Improvements in resource efficiency and waste reduction have been limited by continuing use of older-generation technologies and by consumer lifestyles focusing on mobility, convenience and product disposability.

8. Efforts to change consumption patterns have used a variety of instruments, including process standards, product standards, environmental taxes, reduction of environmentally harmful subsidies, consumer information, eco-labels, and others. More recently, efforts have been made to combine such instruments into integrated product policies addressing all phases of the product life-cycle, including design, production, consumption and disposal. This approach has been driven by the recognition that environmental impacts of products in the consumption and disposal phase can often be addressed most effectively by interventions that influence the design phase. It also recognizes that sustainable consumption and production, taking into account economic, environmental and social issues, require cooperation among a variety of actors in all phases of product production and consumption.

9. In general, despite improvements in efficiency, environmental pressures continue to increase owing to the continuing increase in the volume of goods and services consumed and discarded as a result of increasing income and consumer demand. Reducing the environmental pressures from consumption will require a broader policy framework that addresses the scale pressures of current patterns while encouraging efficiency improvements.[11]

II. Impacts of changes in consumption patterns in developed countries on developing countries

10. Owing to increased consumer awareness and concern for sustainable development, including health, social development and the state of the environment, particularly in developed countries, efforts to change consumption patterns are expanding. The market for environmentally friendly products in OECD countries has grown since the 1980s, although recent empirical evidence suggests that consumers' expressed preferences often are not translated into real purchasing decisions.[12] Consumer organizations and other non-governmental organizations are increasingly taking environmental and social considerations into account in their efforts to assist consumers in making informed choices. Middle- and upper-class consumers in developing countries, in particular young people, are displaying similar patterns of consumption and increasing levels of awareness of the impacts of their consumer choices.[13]

11. The actual and latent preference among consumers in developed and developing countries for sustainably produced products, together with the growing markets for some products, provide both challenges and opportunities for developing countries. Certification for eco-labels and environmental and social standards present challenges. However, many producers in developing countries have taken this trend as an opportunity to explore new export markets. For example, the rapidly growing interest in, and willingness to pay for, organic products have been an incentive for producers both in developing and in developed countries to introduce organic farming practices. The "Fair Trade" movement, which assures consumers in developed countries that the developing-country products they purchase were produced under good social conditions, has increasingly integrated environmental concerns.

12. Consumer and public pressure for sustainable production is leading an increasing number of multinational corporations to adopt uniform standards for all of their global operations and those of their suppliers. This supply-chain pressure is leading to the adoption of cleaner production methods and improved working conditions in companies in developing countries producing for export markets. In order to ensure adequate supplies to meet the growing demand

for sustainably produced products, multinational corporations are often assisting their developing country affiliates and suppliers in meeting the standards of developed-country markets. A growing number of companies in developing countries are obtaining certification of environmental management systems under the ISO 14000 criteria of the International Organization for Standardization (ISO), with a view to meeting the evolving consumer demand in developed-country markets. In addition, growing stakeholder involvement has encouraged corporate policies of social responsibility and corporate reporting on environmental and social issues. The Global Reporting Initiative is an international multi-stakeholder effort to create a common framework for voluntary reporting of economic, environmental and social dimensions of organization-level activities, products and services.[14]

III. Globalization and sustainable consumption

13. An important driving force for changing consumption and production patterns in the world today is globalization. Through globalization, consumers now have more choices of goods and services. Increased trade, FDI and technology transfer are resulting in global dissemination of cleaner production methods that conserve resources and reduce environmental impacts. However, globalization also poses some environmental threats through, for example, increased consumption of natural resources and generation of waste. Increased transport of goods and personal travel result in higher levels of carbon dioxide (CO_2) emissions. Globalization can also result in the spread of unsustainable lifestyles. Current policies and production patterns are insufficient to address the increased stress on the environment owing to increased production and consumption. There is also concern that global competition is undermining social and environmental policies, although this is a matter of intense debate.

14. Globalization is, in some cases, exacerbating the effects of weak environmental policies. For example, demand from the world market for food and other agricultural products may promote excessive use of agro-chemicals, resulting in soil degradation, or encourage unsustainable fishing in the absence of proper fisheries management regimes.[15] High demand and high prices on world markets can increase pressure for unsustainable harvesting of tropical timber. In addition, alien invasive species that accompany goods and transportation can cause significant damage to ecosystems, as in the case of the zebra mussel in the North American Great Lakes.

15. Information technology has accelerated the movements of goods, information and people around the globe and increased the variety of services available to consumers throughout the world. Internet-based "e-commerce" is growing rapidly, for both retail sales and business-to-business transactions. Total transactions through e-commerce were estimated at $127 billion in 1999 and are projected to increase to $1.4 trillion in the United States alone by 2003.[16] While information technology has the potential to reduce material consumption, there is no empirical evidence of such an effect to date, mainly owing to the fact that consumer habits have not changed. For example, electronic mail and improved communications have not reduced the volume of conventional mail or the number of people travelling; and there has resulted a continued rapid increase in the demand for transport, with its accompanying environmental impacts. In some instances, improved technology has even increased energy and material consumption. Global paper consumption is expected to grow by about 50 per cent by 2010, with the largest increase in developing countries, as a result of both increased literacy and expanding use of information and communication technologies.[17]

16. The Internet has also greatly improved networking, exchange of information and coordination of activities among non-governmental organizations concerned with sustainable development, including consumer and environmental organizations. These new capabilities have supported the increased activism of non-governmental organizations in relation to business, Governments and intergovernmental organizations on issues relating to globalization, environmental protection, poverty, debt relief and other development issues.

IV. Issues for further consideration

17. While resource productivity is increasing on a per capita and per unit GDP basis, overall resource consumption and waste continue to grow, as increases in consumption and production outpace the

improvements in eco-efficiency and the changes in consumption patterns. A broader policy framework is required to address the scale pressures of current patterns, while encouraging efficiency improvements and promoting improvements in standards of living, particularly in developing countries.

18. Globalization and the new information and communication technologies provide opportunities to shift to more sustainable consumption and production patterns, but this will not happen automatically. Policies and programmes need to be developed to ensure that the new technologies help shift consumption and production patterns to improve standards of living while reducing resource consumption and environmental damage.

Notes

[1] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

[2] World Bank, *World Development Indicators 2000* (Washington, D.C., 2000) tables 4.5 and 4.7, and *World Investment Report 2000: Cross-border Mergers and Acquisitions and Development* (United Nations publication, Sales No. E.00.II.D.20), table I.1.

[3] New York, Oxford University Press, 1998, overview, p. 2.

[4] World Bank, *World Development Report 2000/2001: Attacking Poverty* (New York, Oxford University Press, 2001), table 10 of Selected World Development Indicators.

[5] Report of the Secretary-General entitled "Energy and sustainable development: options and strategies for action on key issues" (E/CN.17/ESD/2001/2).

[6] *World Development Report 2000/2001*, table 10 of Selected World Development Indicators.

[7] Food and Agriculture Organization of the United Nations (FAO) "Wood energy situation and trends", contribution for the World Energy Conference 1998.

[8] United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), World Bank and World Resources Institute, *World Resources 2000-2001: People and Ecosystems, the Fraying Web of Life* (Oxford, Elsevier, 2000).

[9] UNEP, *Global Environment Outlook 2000* (New York, 1999).

[10] E. Matthews and others, *The Weight of Nations: Material Outflows from Industrial Economies* (Washington, D.C., World Resources Institute, 2000).

[11] "Consumption patterns", in *OECD Environmental Outlook* (OECD, Paris, forthcoming in 2001).

[12] Elaine Geyer-Allely and Adriana Zacarias-Farah, "Information and consumer decision-making: background paper for the OECD Workshop on Information and Consumer Decision-Making for Sustainable Consumption", OECD Environment Directorate, forthcoming (2001).

[13] UNEP/Division of Technology, Industry and Economics (DTIE), Global Consumers Class Study, "An international study on consumer trends and expectations", *Industry and Environment*, October-December 2000 issue, and UNEP/United Nations Educational, Scientific and Cultural Organization (UNESCO), "Is the future yours", research project, Paris, January 2001.

[14] Global Reporting Initiative, Sustainability Reporting Guidelines on Economic, Environmental and Social Performance, 2000.

[15] Hakan Nordstrom and Scott Vaughan, Trade and Environment, Special Studies 4 (Geneva, World Trade Organization, 1999).

[16] "Booming economies, silencing environments and the paths to our future: background note by the Commission for Environmental Cooperation on Critical and Emerging Environmental Trends", note by the Secretariat, Commission for Environmental Cooperation, 2000.

[17] UNEP/DTIE, "Consumption facts and figures", *Industry and Environment*, vol. 22, No. 4 (1999).